AMENDMENTS TO THE CLAIMS

This listing of the claims replaces all prior versions and listings of claims in the application:

Listing of Claims

1. (currently amended) Apparatus for the dynamic stabilization of bones or bone fragments, in particular spinal vertebrae ~~(V)~~, ~~with at least one~~ comprising a longitudinal support ~~(11)~~ that can be fixed to the vertebrae ~~(V)~~, ~~characterized in that~~ the ~~at least one~~ longitudinal support ~~(11) is so constructed that by application of a prespecified bending force it can be~~ plastically ~~deformed~~ deformable from a first stable shape state ~~"A"~~ into a second[[,]] ~~alternative~~ stable shape state ~~"B", but while in the first as well as in the second state remains~~ by application of a prespecified bending force, the longitudinal support remaining flexible within predetermined limits ~~("elastic flexion range")~~ while in the first and second stable shape states.

2. (currently amended) ~~Apparatus according to Claim 1, characterized in that~~ The apparatus of claim 1 wherein the longitudinal support ~~(11)~~ is ~~such that when clamped at one end, while within a stable shape state "A" or "B" it can be~~ elastically ~~deflected~~ deflectable by an angle of 5° to 12°~~, in particular 8°~~, over a length corresponding to the spacing of two adjacent vertebrae[[,]] or about 2 to 5 cm when clamped at one end while in the first or second stable shape state.

3. (currently amended) ~~Apparatus according to Claim 1, characterized in that~~ The apparatus of claim 1 wherein the longitudinal support ~~(11)~~ is ~~constructed so as to be~~ stable[[,]] ~~i.e.~~ and unyielding[[,]] ~~both~~ with respect to anatomically usual longitudinal shear forces and with respect to anatomically usual transverse shear forces.

4. (currently amended) ~~Apparatus according to Claim 1, characterized in that~~ The apparatus of claim 1 wherein the longitudinal support ~~(11)~~ is ~~constructed so as to be~~ substantially stable ~~with respect to~~ when subjected to anatomically usual torsion.

5. (currently amended) ~~Apparatus according to claim 1, characterized in that~~ The apparatus of claim 1 wherein the longitudinal support ~~(11)~~ is ~~constructed~~ in the shape of a flat band or strip.

6. (currently amended) ~~Apparatus according to Claim 1, characterized in that~~ The apparatus of claim 1 wherein the longitudinal support ~~(11)~~ is ~~constructed so as to be~~ rotationally symmetrical.

7. (currently amended) ~~Apparatus according to Claim 1, characterized in that~~ The apparatus of claim 1 wherein the longitudinal support ~~(11)~~ is hollow~~, in particular is constructed as a hollow rod~~.

8. (currently amended) ~~Apparatus according to Claim 1, characterized in that~~ The apparatus of claim 1 wherein the longitudinal support ~~(11)~~ comprises ~~an in particular~~ a plastically deformable core ~~(12)~~ made of metal~~, in particular titanium or a titanium alloy, which is~~ encased in a human-tissue-compatible plastic ~~(13), in particular one~~ that ~~ensures~~ provides flexibility within a stable shape state.

9. (currently amended) ~~Apparatus according to Claim 1, characterized in that~~ The apparatus of claim 1 wherein the longitudinal support ~~(11)~~ is ~~so~~ dimensioned such that within the ~~elastic flexion range~~ predetermined limits its surface stress is always below the dynamic breaking stress.

10. (currently amended) ~~Apparatus according to Claim 8, characterized in that in the case of a longitudinal support with core (12),~~ The apparatus of claim 8 wherein both

the core and the ~~easing (13)~~ plastic encasing are dimensioned such that ~~in~~ within the ~~elastic flexion range~~ predetermined limits the surface stress of both the core ~~(12)~~ and ~~easing (13)~~ the plastic encasing is always below the respective dynamic breaking stress.

11. (currently amended) ~~Apparatus according to Claim 8, characterized in that~~ The apparatus of claim 8 wherein the core ~~(12)~~ is encased in more than one layer.

12 (currently amended) ~~Apparatus according to Claim 1, characterized in that it comprises~~ The apparatus of claim 1 further comprising bone-anchoring means~~, in particular pedicle screws (10),~~ to which the longitudinal support ~~or supports (11)~~ can be fixed.

13. (currently amended) ~~Apparatus according to Claim 1, characterized in that it comprises~~ The apparatus of claim 1 further comprising longitudinal-support-connecting means~~, which can be used~~ operative to connect at least two support sections to one another.

14. (currently amended) ~~Apparatus according to Claim 13, characterized in that~~ The apparatus of claim 13 wherein the longitudinal-support-connecting means comprise two oppositely situated support-receiving openings[[,]] into each of which an end section of the support can be inserted and fixed by ~~way of~~ a clamping screw or similar clamping element.

15. (currently amended) ~~Apparatus according to Claim 1, characterized in that~~ The apparatus of claim 1 wherein the bone-anchoring means comprise longitudinal-support-receiving openings that can be spaced at variable axial distances from the opposite distal end, so that the longitudinal support ~~(11)~~ can be adjusted to a correspondingly different distance from the vertebra ~~(V)~~.

16. (currently amended) ~~Apparatus according to Claim 8, characterized in that~~ The apparatus of claim 8 wherein the core ~~(12)~~ is ~~constructed~~ in the form of a flat band or

strip[[,]] with a width smaller than or equal to the corresponding dimension of the longitudinal support.

17. (currently amended) ~~Apparatus according to Claim 8, characterized in that~~ The apparatus of claim 8 wherein the core ~~(12)~~ is rotationally symmetrical~~, in particular circular,~~ with either a constant diameter or a diameter that varies along the length of the longitudinal support.

18. (currently amended) ~~Apparatus according to Claim 17, characterized in that~~ The apparatus of claim 17 wherein the diameter of the core ~~(12)~~, at least in sections, is continually enlarged or reduced and/or altered in a stepwise manner, ~~such that in the last case~~ the transitions of the stepwise manner in the region of a step are constructed so as to reduce stress~~, in particular are rounded~~.

19. (new) The apparatus of claim 18 wherein the transitions of the stepwise manner in the region of a step are rounded to reduce stress.

20. (new) The apparatus of claim 17 wherein the rotationally symmetrical core is circular.

21. (new) The apparatus of claim 8 wherein the metal core comprises titanium or a titanium alloy.

22. (new) The apparatus of claim 7 wherein the longitudinal support comprises a hollow rod.

23. (new) The apparatus of claim 1 wherein the predetermined limits comprise the elastic flexion range.